L Number	Hits	Search Text	DB	Time stamp
1	54	diacrylate and $6mercaptopropionate and (buffer or glycylglycine)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 07:45
2	1126	glycylglycine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 07:45
3	8	glycylglycine and buffer and diacrylate	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 08:06
4	7	(("6312462") or ("6395019") or ("6319276") or ("20030125797")).PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 09:43
5	2018	((623/17.11,17.16) or (606/61)).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 11:36
6	646	tissue and polyurethane near3 adhesive	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 11:37
7	107	tissue same polyurethane near3 adhesive	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 13:48
8	1	tissue and (polyurethane and cyanoacryl$3 and fibrin and polyisocyanate and polyisocyanate) same adhesive and albumin with soldier and collagen and (ptfe or polytetrafluroethylene)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 13:52
9	1	tissue and (polyurethane and cyanoacryl$3 and fibrin and polyisocyanate and polyisocyanate) same adhesive and albumin with soldier	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 13:52
10	1	tissue and (polyurethane and cyanoacryl$3 and fibrin and polyisocyanate and polyisocyanate) same adhesive and soldier	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 13:52
11	1	tissue and (polyurethane and cyanoacryl$3 and fibrin) same adhesive and soldier	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 13:53
12	33	tissue and (polyurethane and cyanoacryl$3 and fibrin) same adhesive	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 14:03
13	5	tissue with (adhesive or glue)and (polyurethane and foaming adj agent) same adhesive	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 14:10
14	40	tissue with (adhesive or glue)and (polyisocyanate) same adhesive	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 14:12
15	34	tissue with (adhesive or glue)and(polyisocyanate) with adhesive	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 14:17
16	1	tissue with (adhesive or glue)and albumin with soldier	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 14:17
17	28	tissue with (adhesive or glue)and albumin with solder	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 14:24

18	43	tissue with (adhesive or glue) and collagen and hernia and (ptfe or polytetrafluoroethylene$)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/09/25 14:25

EAST Browser - L12: (33) tissue and (... | US 5676670 A | Tag: S | Doc: 6/33 (SORTED) | Format: KWIC

File Edit View Tools Window Help

	Document ID	R	So	Issue Da	Pag	Title
1	US 4804691 A		U	19890214	8	Method for
2	US 5350798 A		U	19940927	5	Absorbable
3	US 5459177 A		U	19951017	21	Adhesive f
4	US 5489294 A		U	19960206	11	Steroid el
5	US 5658592 A		U	19970819	21	Medical cr
6	US 5676670 A		U	19971014	43	Catheter a
7	US 5713917 A		U	19980203	26	Apparatus
8	US 5770229 A		U	19980623	21	Medical pc
9	US 5797920 A		U	19980825	47	Catheter a
10	US 5873811 A		U	19990223	8	Compositic
11	US 5899939 A		U	19990504	8	Bone-deriv
12	US 5957949 A		U	19990928	18	Percutaneo
13	US 6045565 A		U	20000404	17	Percutaneo
14	US 6152144 A		U	20001128	22	Method and
15	US 6213126 B1		U	20010410	22	Percutaneo
16	US 6238406 B1		U	20010529	16	Percutaneo
17	US 6287315 B1		U	20010911	27	Apparatus
18	US 6296604 B1		U	20011002	15	Methods of
19	US 6299631 B1		U	20011009	8	Polyester/
20	US 6335007 B1		U	20020101	5	Collagen c
21	US 6334869 B1		U	20020101	25	Endolumina
22	US 6364823 B1		U	20020402	16	Methods of
23	US 20020049503		U	20020425	17	Surgical r
24	US 6387391 B1		U	20020514	15	Bioresorba
25	US 20020077634		U	20020620	28	Method for
26	US 20020116026		U	20020822	9	Polyester/
27	US 20020173770		U	20021121	18	Adhesive c
28	US 20030036800		U	20030220	16	Composite
29	US 6524327 B1		U	20030225	7	In-situ bc
30	WO 200226848 A		D	20030225		Organic hy
31	US 20030039676		U	20030227	37	Shaped loa
32	US 20030073979		U	20030417	23	Medical de
33	US 20030153976		U	20030814	69	Spinal dis

Detailed Description Text - DETX (119):

With a sharp knife, the surgeons cut into the coronary artery (arteriotomy). The arteriotomy is then increased to 8 to 12 mm with Pott's or reversed acute angle scissors. The internal diameter of the coronary artery is calibrated at the size recorded. The distal part of the graft that has been set aside is sewn to the coronary artery with the same fine sutures that are used in standard bypass operations (FIG. 41). A continuous suture of 6-0 or 7-0 Prolene is begun in the heel of the vein graft with a narrow mattress stitch and continued to the proximal portion of the coronary artery. Approximately 1-mm bites are taken as the suture line is continued around one side to the distal end. At that point the suture line may be interrupted with one or more sutures. With smaller vessels interrupted sutures are easy to insert and less likely to constrict the anastomosis. With larger vessels (2.5 mm or greater) the suture line may be continued without interruption around the distal end. The other end of the original stitch is continued on the contralateral side, and the anastomosis is terminated at the midpoint of the arteriotomy. Anastomotic patency is checked in both directions. A flush of clear solution through the needle may be of aid during the performance of the distal anastomosis to keep the anastomotic area free of blood. Alternatively, the coronary artery and bypass vein grafts can be anastomosed by applying tissue adhesive (glue) between their adjacent outer walls, without using sutures, which facilitates and expedites the coronary anastomosis when application of tissue adhesive make two structures bonded in a side-to-side fashion, a fenestration in a proper length is made between them by putting an incision extending from the lumen of vein graft to the lumen of the coronary artery with a knife inserted via the distal open end of the graft. After this, the open distal end of the vein graft is sewn as a blind end.

Detailed Description Paragraph Table - DETL (4):

TABLE 4

Biocompatible Adhesives
Adhesives fibrin glue; histacryl (butyl-2 cyanoacrylate) tissue adhesive; cyanoacrylates; liquid silicones; epoxy resins; and polyurethane adhesives.

EAST Browser - L12: (33) tissue and (| US-5713917-A | Tag: S | Doc: 7/33 (SORTED) | Format: KWIC

File Edit View Tools Window Help

	Document ID	RSc	Issue Da	Pag	Ti
1	US 4804691 A	U	19890214	8	Methoc
2	US 5350798 A	U	19940927	5	Absorb
3	US 5459177 A	U	19951017	21	Adhesi
4	US 5489294 A	U	19960206	11	Steroi
5	US 5658592 A	U	19970819	21	Medica
6	US 5676670 A	U	19971014	43	Cathet
7	US 5713917 A	U	19980203	26	Appara
8	US 5770229 A	U	19980623	21	Medica
9	US 5797920 A	U	19980825	47	Cathet
10	US 5873811 A	U	19990223	8	Compos
11	US 5899939 A	U	19990504	8	Bone-c
12	US 5957949 A	U	19990928	18	Percut
13	US 6045565 A	U	20000404	17	Percut
14	US 6152144 A	U	20001128	22	Methoc
15	US 6213126 B1	U	20010410	22	Percut
16	US 6238406 B1	U	20010529	16	Percut
17	US 6287315 B1	U	20010911	27	Appara
18	US 6296604 B1	U	20011002	15	Methoc
19	US 6299631 B1	U	20011009	8	Polyes
20	US 6335007 B1	U	20020101	5	Collag
21	US 6334869 B1	U	20020101	25	Endolu
22	US 6364823 B1	U	20020402	16	Methoc
23	US 20020049503	U	20020425	17	Surgic
24	US 6387391 B1	U	20020514	15	Biores
25	US 20020077634	U	20020620	28	Methoc
26	US 20020116026	U	20020822	9	Polyes
27	US 20020173770	U	20021121	18	Adhesi
28	US 20030036800	U	20030220	16	Compos
29	US 6524327 B1	U	20030225	7	In-sit
30	WO 200226848 A	D	20030225		Organi
31	US 20030039676	U	20030227	37	Shapec
32	US 20030073979	U	20030417	23	Medica
33	US 20030153976	U	20030814	69	Spinal

US-PAT-NO: 5713917

DOCUMENT-IDENTIFIER: US 5713917 A

TITLE: Apparatus and method for engrafting a blood vessel

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Brief Summary Text - BSTX (28):
In a preferred embodiment, the graft apparatus further comprises a plurality of outer packets formed of a light degradable polymer and containing a tissue adhesive which is released by fiber-optic scope after the graft is implanted to bond the ends of the graft to the interior surface of the vessel and prevent leakage through micro-cracks therebetween. Medical grade expandable foam cuffs preferably surround the middle portion of the graft to promote clotting within the aneurysm sac. Alternatively, light actuated cryo precipitate fibrin glue may be painted onto the exterior surface of the graft material with a brush. The adhesive naturally remains as syrup until light actuates and cures. This replaces the need for packets and reduces the possibility of premature release of adhesive from packets that may break during deployment.

Brief Summary Text - BSTX (36):
Once the graft is correctly deployed, the deployment means may be completely withdrawn from the patient, and a fiber-optic scope inserted through the entry site to direct light at the tissue adhesive packets to cause the packet polymer material to degrade, thereby releasing the tissue adhesive. Finally, the entry site attended using standard procedure. Post-operative imaging may be conducted to verify isolation of the aneurysm, with particular attention being given to the occurrence of leaks at the proximal end of the graft closest to the heart.

Detailed Description Text - DETX (6):
Graft 20 further includes a plurality of releasable tissue adhesive packets 56 fixed to an exterior surface of graft material 24 at ends 28 and 30 for establishing a fluid tight seal between graft material 24 and the inner wall of aorta 10. Packets 56 may be constructed of photosensitive polyurethane and filled with biocompatible tissue adhesive, for example fibrin glue or isobutyl 2 cyanoacrylate. The tissue adhesive remains secure during deployment, and may subsequently be released by directing a fiber-optic catheter light source at packets 56 from inside graft 20 to cause breakdown of the packet material. Tissue adhesive enters and occupies small micro-cracks existing between graft material 24 and the interior surface of aorta 10 to form a bonding fluid seal, thereby preventing the serious problem of leakage. An alternative to the described tissue adhesive packets is the use of light activated cryo precipitate fibrin glue painted on the exterior surface of the graft material.

	Document ID	K	Sc	Issue Da	Pag	Title
1	US 6383958 B1		U	20020507	25	Nonwoven she
2	US 20020049503		U	20020425	17	Surgical rep
3	US 20010028934		U	20011011	23	Transfer fil
4	US 6191216 B1		U	20010220	8	Hydrophilic,
5	US 6190689 B1		U	20010220	12	Hydrophilic

powders prepared from zinc oxide and strontium carbonate together with glass fibres, such as glass fibres of 0.1-1 mm in length. Organic fillers which may in particular be listed are swellable powders and fibres having a fibre length of >0.01 mm, for example fibres based on polyacrylic acids and the salts thereof or others, as are for example stated in Absorbent Polymer Technology (Brannon-Peppas, Harland, Elsevier, Amsterdam-Oxford-New York-Tokyo, 1990, pp. 9-22), and materials used as textile fibres, such as for example polyester or polyamide fibres. Dyes or colouring pigments should in particular be taken to be those as may be used in foodstuffs, packaging or cosmetics. Liquid extenders or resins are in particular polymeric vinyl compounds, polyacrylates and other copolymers conventional in adhesives technology, which may have an influence upon adhesion properties.

Brief Summary Text - BSTX (33):

The polyurethane gel compositions and polyurethane foam gel compositions according to the invention may generally be used for the production of mouldings and adhesive layers, in particular of products which come into contact with human and animal tissues, such as with the skin, with mucous membranes or with open wounds or body fluids or secretions, such as for example saliva, blood, wound fluids, urine, faeces or sweat. The materials are also suitable for sticking or attachment to the skin. Use in medical applications is preferred, in particular as weakly or strongly self-adhesive coatings, used as sticking plasters, rapid wound dressings or for sticking wound care products onto the body's surface. They also act to absorb blood and wound secretions and to provide padding and thermal insulation. Absorption of liquids may be accelerated by foaming the gels according to the invention. A distinctly improved padding effect and improved thermal insulation are furthermore achieved. Further areas of application are orthopaedic articles, personal hygiene or cosmetic articles or highly moisture absorbing, swellable and cushioning overlays or inserts, optionally also as pressure-distributing filling compositions for cushions or padding elements.

Detailed Description Text - DETX (23):

2) A parts by weight (pbw) of the base polyol were combined with B pbw of anti-oxidant, C pbw of catalyst and optionally also E pbw of filler and homogenised for 2 hours at room temperature in a 5 litre stirring apparatus. Using a standard mixing and metering unit for processing polyurethane and adhesive preparations, Y pbw of this mixture were vigorously mixed with Z pbw of isocyanate 1 and optionally F pbw of the foaming agent.

Claims Text - CLTX (1):

1. Hydrophilic, self-adhesive polyurethane gel compositions prepared from

EAST Browser - L15: (34) tissue with... | US 4582648 A | Tag: S | Doc: 1/34 (SORTED) | Format: KWIC

File Edit View Tools Window Help

	Document ID	RSo	Issue Da	Pag	Title
1	US 4582648 A	U	19860415	12	.alpha.-Cy
2	JP 62148666 A	D	19870702		New adhesi
3	JP 62290465 A	D	19871217		Adhesive c
4	US 4740534 A	U	19880426	6	Surgical a
5	EP 328585 B	D	19890126		Novel, met
6	US 4806614 A	U	19890221	6	Surgical a
7	US 4829099 A	U	19890509	27	Metabolica
8	EP 332405 A2	E	19890913		Surgical a
9	EP 332405 A	D	19890913		Surgical a
10	US 4968725 A	U	19901106	25	Dental adh
11	US 4994542 A	U	19910219	7	Surgical a
12	EP 466552 A	D	19920115		Polyuretha
13	EP 488629 A	D	19920603		Surgical a
14	US 5173301 A	U	19921222	8	Surgical a
15	JP 05111530 A	J	19930507		BIOMEDICAL
16	JP 05285217 A	J	19931102		ANTI-INFEC
17	US 5266608 A	U	19931130	6	Biomedical
18	US 5457141 A	U	19951010	13	Surgical a
19	US 5486547 A	U	19960123	13	Surgical a
20	US 5489624 A	U	19960206	14	Hydrophili
21	US 5536768 A	U	19960716	14	Hydrophili
22	US 5660178 A	U	19970826	14	Hydrophili
23	US 6152144 A	U	20001128	22	Method and
24	US 6296607 B1	U	20011002	8	In situ bu
25	US 6348548 B1	U	20020219	10	Method for
26	US 20020049503	U	20020425	17	Surgical r
27	US 20020049363	U	20020425	10	Situ bulki
28	US 20020173770	U	20021121	18	Adhesive c
29	US 20020193534	U	20021219	11	Method for
30	US 6524327 B1	U	20030225	7	In-situ bo
31	WO 2003049637 A	D	20030619		Biocompati
32	US 6593435 B2	U	20030715	8	Method for
33	US 20030135238	U	20030717	9	In situ bo
34	DE 1492502 A	D	N/A		An adhesiv

US-PAT-NO: 4582648

DOCUMENT-IDENTIFIER: US 4582648 A

TITLE: .alpha.-Cyanoacrylate compound, method of preparing sa and adhesive comprising same

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Detailed Description Text - DETX (19):

The novel .alpha.-cyanoacrylate compounds according to the present inventi show a bonding performance to a substrate made of various kinds of material i the same manner as the known .alpha.-cyanoacrylate such as ethyl .alpha.-cyanoacylate and are effectively used as fast setting adhesives. The adhesives comprising the novel .alpha.-cyanoacrylate compounds according to t present invention are odorless or slightly give out fragrance whereby being remarkably easy to handle in the preparing process and the bonding process, producing no whitening in the bonding process, and improving the polymerizati set products in brittleness. In addition, they are superior to the conventional .alpha.-cyanoacrylate in bonding strength to various kinds of substrate, for example metals, plastics, rubber, glass, wood and the like, particularly plated articles. It is perhaps owing to the chelate effect. Furthermore, the adhesives comprising .alpha.-cyanoacrylate, in which R.sup.2 is allyl group (CH.sub.2 CH.dbd.CH.sub.2), of the novel .alpha.-cyanoacrylate compounds according to the present invention have such an advantage that the substrate bonded therewith does not show a large reduction in bonding strengt even when kept in a long time under the high temperature condition (for examp one month at 150.degree. C.). In addition, the adhesives according to the present invention are superior in bonding (i.e. joining, bleed-stopping) strength to tissues of living bodies such as skin, gum, blood vessel and various kinds of organ and absorptivity into tissues after bonding.

Detailed Description Text - DETX (20):

Additives such as radical polymerization inhibitors, anion polymerization inhibitors, plasticizers, tackifiers, coloring agents, fillers, diluents, water, perfumes, carboxylic acids, carboxylic anhydrides and polyisocyanates may be added to the adhesives according to circumstances.

	Document ID	K	Sc	Issue Da	Pag	Title
13	US 5190057 A		U	19930302	7	Sarfarazi
14	US 5197973 A		U	19930330	20	Synthetic
15	US 5224957 A		U	19930706	5	Method of
16	US 5269812 A		U	19931214	12	Methods an
17	US 5273056 A		U	19931228	3	Use of com
18	US 5290272 A		U	19940301	14	Method for
19	US 5291887 A		U	19940308	22	Apparatus
20	US 5330530 A		U	19940719	13	Fiber pros
21	US 5354336 A		U	19941011	10	Method for
22	US 5375611 A		U	19941227	5	Method for
23	US 5383899 A		U	19950124	7	Method of
24	US 5391201 A		U	19950221	6	Method of
25	US 5392787 A		U	19950228	11	Multifunct
26	US 5397352 A		U	19950314	5	Method of
27	US 5410016 A		U	19950425	34	Photopolym
28	US 5489300 A		U	19960206	12	Surgical m
29	US 5538016 A		U	19960723	7	Method of
30	US 5545222 A		U	19960813	19	Method usi
31	US 5567435 A		U	19961022	30	Photopolym
32	US 5569239 A		U	19961029	13	Photoreact
33	US 5571216 A		U	19961105	10	Methods an
34	US 5577517 A		U	19961126	12	Method of
35	US 5597381 A		U	19970128	18	Methods fo
36	US 5626863 A		U	19970506	32	Photopolym
37	US 5636645 A		U	19970610	10	Method and
38	US 5653769 A		U	19970805	8	Methods fo
39	US 5653749 A		U	19970805	42	Prefabrica
40	US 5653730 A		U	19970805	24	Surface op
41	US 5662705 A		U	19970902	42	Test devic
42	US 5669934 A		U	19970923	25	Methods fo
43	US RE35653 E		U	19971104	7	In vivo de
44	US 5694951 A		U	19971209	13	Method for
45	US 5707647 A		U	19980113	11	Adjunctive
46	US 5716981 A		U	19980210	121	Anti-angio
47	US 5715835 A		U	19980210	46	Methods fo
48	US 5718711 A		U	19980217	14	Ultrasoft
49	US 5800522 A		U	19980901	18	Interior l
50	US 5814066 A		U	19980929	7	Reduction
51	US 5823993 A		U	19981020	11	Computer c
52	US 5826587 A		U	19981027	10	Ultrasoft
53	US 5829447 A		U	19981103	54	Method and
54	US 5843156 A		U	19981201	22	Local polyp
55	US 5843124 A		U	19981201	39	Surface op
56	US 5842477 A		U	19981201	13	Method for
57	US 5849035 A		U	19981215	25	Methods fo
58	US 5855614 A		U	19990105	55	Method and
59	US 5866415 A		U	19990202	4	Materials
60	US 5882328 A		U	19990316	19	Method to
61	US 5881733 A		U	19990316	3	Technique
62	US 5888219 A		U	19990330	16	Method of
63	US 5900245 A		U	19990504	21	Compliant
64	US 5924424 A		U	19990720	51	Method and
65	US 5935131 A		U	19990810	11	Apparatus
66	US 5948427 A		U	19990907	7	Micropartic
67	US 5954655 A		U	19990921	16	Method for
68	US 5990379 A		U	19991123	19	Prosthetic
69	US 5989244 A		U	19991123	14	Method of

US-PAT-NO: 5990379

DOCUMENT-IDENTIFIER: US 5990379 A
See image for Certificate of Correction

TITLE: Prosthetic devices including elastin or elastin-based materials

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Brief Summary Text - BSTX (7):
Until relatively recently, the primary methods available for securing a prosthetic material to tissue (or tissue to tissue) involved the use of sutures or staples. Fibrin glue, a fibrinogen polymer polymerized with thrombin, has also been used (primarily in Europe) as a tissue sealant and hemostatic agent.

Detailed Description Text - DETX (10):
Tissue welding techniques employing a soldering agent can be used. Such techniques are known (WO 91/04073). Any proteinaceous material that thermally denatures upon heating can be used as the soldering agent (for example, any serum protein such as albumin, fibronectin, Von Willebrand factor, vitronectin, or any mixture of proteins or peptides). Solders comprising thrombin polymerized fibrinogen are preferred, except where such materials would cause undesirable thrombosis or coagulation such as within vascular lumens. Solders are selected for their ability to impart greater adhesive strength between the biomaterial and the tissue. The solder should be non-toxic and generally biocompatible.

Current US Original Classification - CCOR (1):
128/898

	Document ID	KSc	Issue Da	Pag	Title
54	US 5843156 A	U	19981201	22	Local polyı
55	US 5843124 A	U	19981201	39	Surface opı
56	US 5842477 A	U	19981201	13	Method for
57	US 5849035 A	U	19981215	25	Methods fo
58	US 5855614 A	U	19990105	55	Method and
59	US 5866415 A	U	19990202	4	Materials
60	US 5882328 A	U	19990316	19	Method to
61	US 5881733 A	U	19990316	3	Technique
62	US 5888219 A	U	19990330	16	Method of
63	US 5900245 A	U	19990504	21	Compliant
64	US 5924424 A	U	19990720	51	Method and
65	US 5935131 A	U	19990810	11	Apparatus
66	US 5948427 A	U	19990907	7	Micropartic
67	US 5954655 A	U	19990921	16	Method for
68	US 5990379 A	U	19991123	19	Prosthetic
69	US 5989244 A	U	19991123	14	Method of
70	US 6025538 A	U	20000215	16	Compound b
71	US 6024736 A	U	20000215	15	Laparascop
72	US 6024096 A	U	20000215	22	Anterior s
73	US 6042909 A	U	20000328	10	Encapsulat
74	US 6044847 A	U	20000404	15	Tuck and f
75	US 6051248 A	U	20000418	21	Compliant
76	US 6077227 A	U	20000620	29	Method for
77	US 6079414 A	U	20000627	52	Method for
78	US 6121341 A	U	20000919	29	Redox and
79	US 6132360 A	U	20001017	11	Magnetic s
80	US 6131579 A	U	20001017	10	Wire based
81	US 6152144 A	U	20001128	22	Method and
82	US 6155265 A	U	20001205	13	Controlled
83	US 6177095 B1	U	20010123	16	Polymeriza
84	US 6213126 B1	U	20010410	22	Percutaneo
85	US 6217894 B1	U	20010417	21	Compliant
86	US 6221068 B1	U	20010424	18	Method for
87	US 20010000803	U	20010503	11	Lamina pro
88	US 6251065 B1	U	20010626	22	Methods an
89	US 6260552 B1	U	20010717	48	Transventr
90	US 6269820 B1	U	20010807	10	Method of
91	US 20010017138	U	20010830	17	Medical de
92	US 6296639 B1	U	20011002	17	Apparatuse
93	US 6306922 B1	U	20011023	27	Photopolym
94	US 20010034515	U	20011025	29	Laser onyc
95	US 20010037808	U	20011108	39	Methods an
96	US 6341608 B1	U	20020129	3	Method for
97	US 6343605 B1	U	20020205	22	Percutaneo
98	US 6352710 B1	U	20020305	20	Compliant
99	US 6358269 B1	U	20020319	3	Method of
100	US 6386203 B1	U	20020514	13	Controlled
101	US 20020062146	U	20020523	38	Methods an
102	US 20020065530	U	20020530	11	Methods an
103	US 6401720 B1	U	20020611	53	Method and
104	US 6408855 B1	U	20020625	24	Means for
105	US 20020091229	U	20020711	23	Photopolym
106	US 6420519 B1	U	20020716	7	Modifying
107	US 20020096183	U	20020725	53	Method and
108	US 20020100485	U	20020801	54	Method and
109	US 6439237 B1	U	20020827	22	Anterior s
110	US 6447443 B1	U	20020910	43	Method for

US-PAT-NO: 6439237

DOCUMENT-IDENTIFIER: US 6439237 B1

TITLE: Anterior segment coronary restoration apparatus and method

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Detailed Description Text - DETX (48):

Within these wide objectives and parameters, there will be variations on the structure of the patch and the methods of restoration. Although the non-circular configuration of the sheet material and ring are believed to be critical, the shape of the patch 72 may vary widely to provide the best anatomical fit with the natural shape of the ventricle 25. The sheet material 81 may be composed of a variety of materials, both natural and artificial. These materials may be woven or nonwoven to achieve a desired structure for the sheet material 81. The ring 87 may similarly be formed from a variety of materials and provided with a variety of shapes in order to add structure to the patch 72 without interfering with the normal contractions of the heart 12. Variations of the steps of the associated restoration method might include mounting the patch with a convex surface facing the ventricular cavity, use of tissue adhesives are also contemplated for attaching sealing and otherwise fixing the patch 72 to the Fontan neck 78.

Current US Original Classification - CCOR (1):

128/898

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United States Patent [19]

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[45] Date of Patent: *Oct. 29, 1996

[54] **PHOTOREACTIVE SUTURING OF BIOLOGICAL MATERIALS**

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[73] Assignee: Rare Earth Medical, Inc., West Yarmouth, Mass.

[21] Appl. No.: 292,608

[22] Filed: Aug. 18, 1994

[*] Notice: The term of this patent shall not extend beyond the expiration date of Pat. No. 5,207,670.

Related U.S. Application Data

[63] Continuation of Ser. No. 36,192, May 3, 1993, abandoned, which is a continuation of Ser. No. 804,791, Dec. 9, 1991, Pat. No. 5,207,670, which is a continuation-in-part of Ser. No. 538,977, Jun. 15, 1990, Pat. No. 5,077,417.

[51] Int. Cl.[6] A61N 5/06

[52] U.S. Cl. 606/8; 606/10; 606/12; 606/213; 128/898

[58] Field of Search 606/2, 3, 7, 8, 606/9, 1, 13, 215–216, 219; 607/88, 89; 128/898

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Assistant Examiner—Michael Peffley
Attorney, Agent, or Firm—Thomas J. Engellenner; Lahive & Cockfield

[57] ABSTRACT

Materials and methods for photoreactive suturing of biological tissue are disclosed. The suture material includes a structure adapted for positioning at an anastomotic site and has at least a portion of the structure formed by a photoreactive crosslinking agent, such that upon irradiation of the structure the crosslinking agent adheres to the biological material. In one embodiment, the suture material can also include a high tensile strength element which is coated with a laser activatable crosslinking agent or glue. The suture methods can be practiced manually, or with various apparatus, such as endoscopes, catheters or hand-held instruments.

21 Claims, 5 Drawing Sheets